



MINI-SB DUAL SENSOR

SUPPLEMENTAL INSTALLATION GUIDE

VERSION 2024-04-21

INTRODUCTION

GENERAL INFO

This is a remix and optimized Mini Stealthburner with dual sensors for use with ERCF. The filament path has been optimized for heavy load and unload duty cycles. Redesigned filament path for a more stable structure to handle the loading of heavily curved filaments and new wire channels for managing the new sensor wires.

BOM (in addition to standard Mini Stealthburner BOM)
(2)x Omron D2F-5L, D2F-01F, or D2F-01L Micro Switch
(1)x MR85ZZ bearings
(1)x 5.5 steel ball (3) coloured 28AWG wires
(2)x M2x10mm SHCS or BHCS
(2) interconnects for your breakout board

Requires some soldering and well-tuned printer. Print the Swiss cheese calibration cube included in the repo. Please refer to the original Mini Stealthburner guide found in the **Doc** folder of the GitHub repository. I did not include every toolhead from the original repository, but if you are looking for a specific one, please request it and I can make an adjustment for it. I included the most popular heads in this current edition.

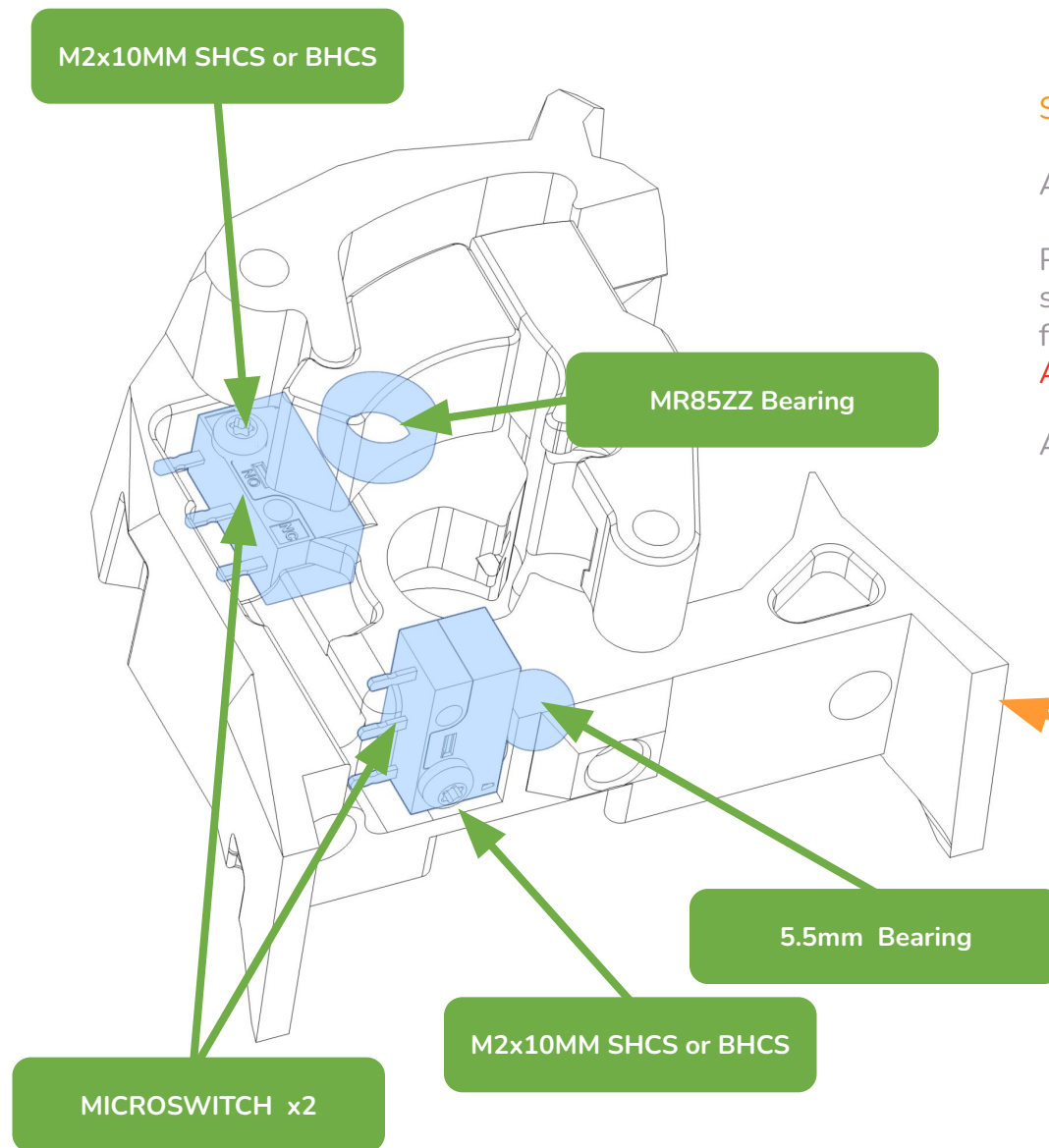
Remixed/inspired from single switch version from:

<https://www.printables.com/model/562384-voron-mini-stealthburner-ercf-filament-sensor>

Redesigned from the original at:

<https://github.com/VoronDesign/Voron-0/tree/Voron0.2r1/STLs>

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Add the MR

Preload **MR608ZZ** Bearing to **Buffer_Wheel**, and press firmly to seat on bottom (two thumbs on flat table). Slide the wheel (with flat side towards the **Support_Arm**) onto **Axle_N_Double_Thread**.

Add **Axle_Spacer** to the Axle and **Tag_Plate** to **Support_Arm**

[a]_MSBDS_Extriuder Midbody.stl

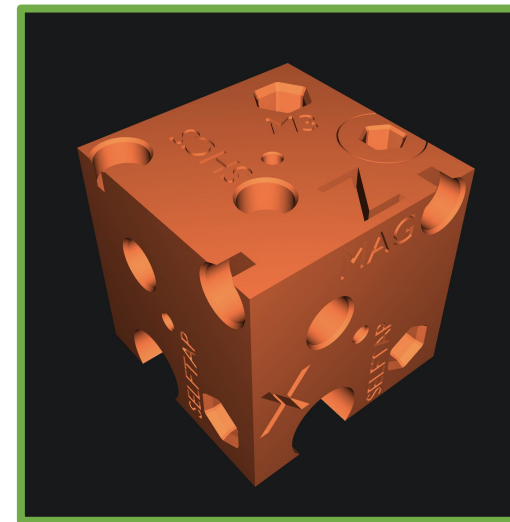
DUAL SENSOR INSTALLATION



PREPERATION

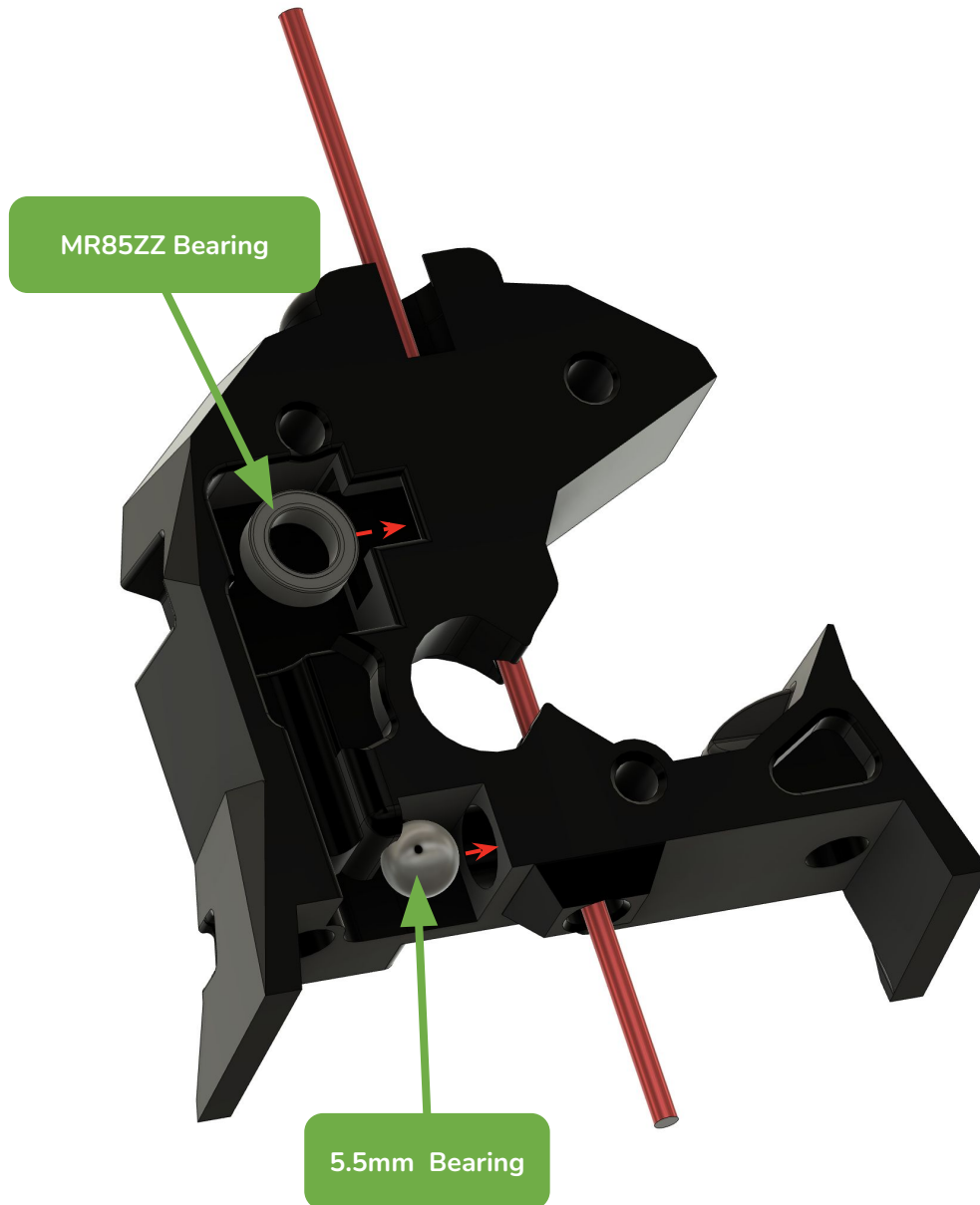
This supplemental guide falls between page 162 and 163 of the Mini Stealthburner Assembly guide. The [\[a\]_MSBDS_Extriuder Midbody.stl](#) comes with built in supports for printing and requires removal. These should be very easy to remove with a slotted screwdriver with small pressure to the side. Do not force the parts. If it is fused, the you're printer requires more tuning. Use the [Swiss_Cheese_Calibration_Cube.stl](#) found in the tool folder

There is a total of 5 supports to remove



The [Swiss_Cheese_Calibration_Cube.stl](#) can be helpful at the beginning of any project to help identify tolerance issues.

DUAL SENSOR INSTALLATION

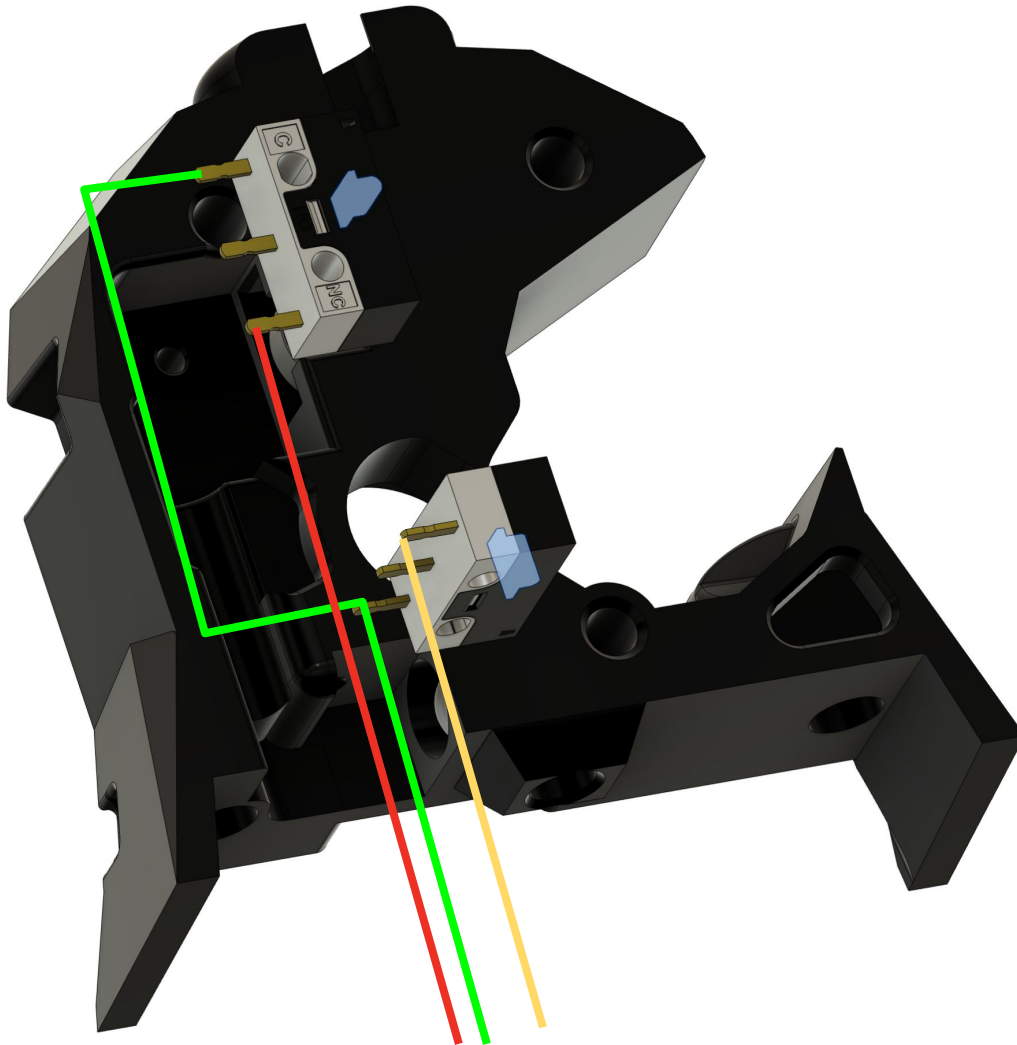


PREPERATION

Check the voids for any loose filament, and test the filament path with a piece of filament for clearance. There should be no obstructions found in there.

Insert **MR85ZZ Bearing** and the **5,5mm Ball Bearing** into the voids

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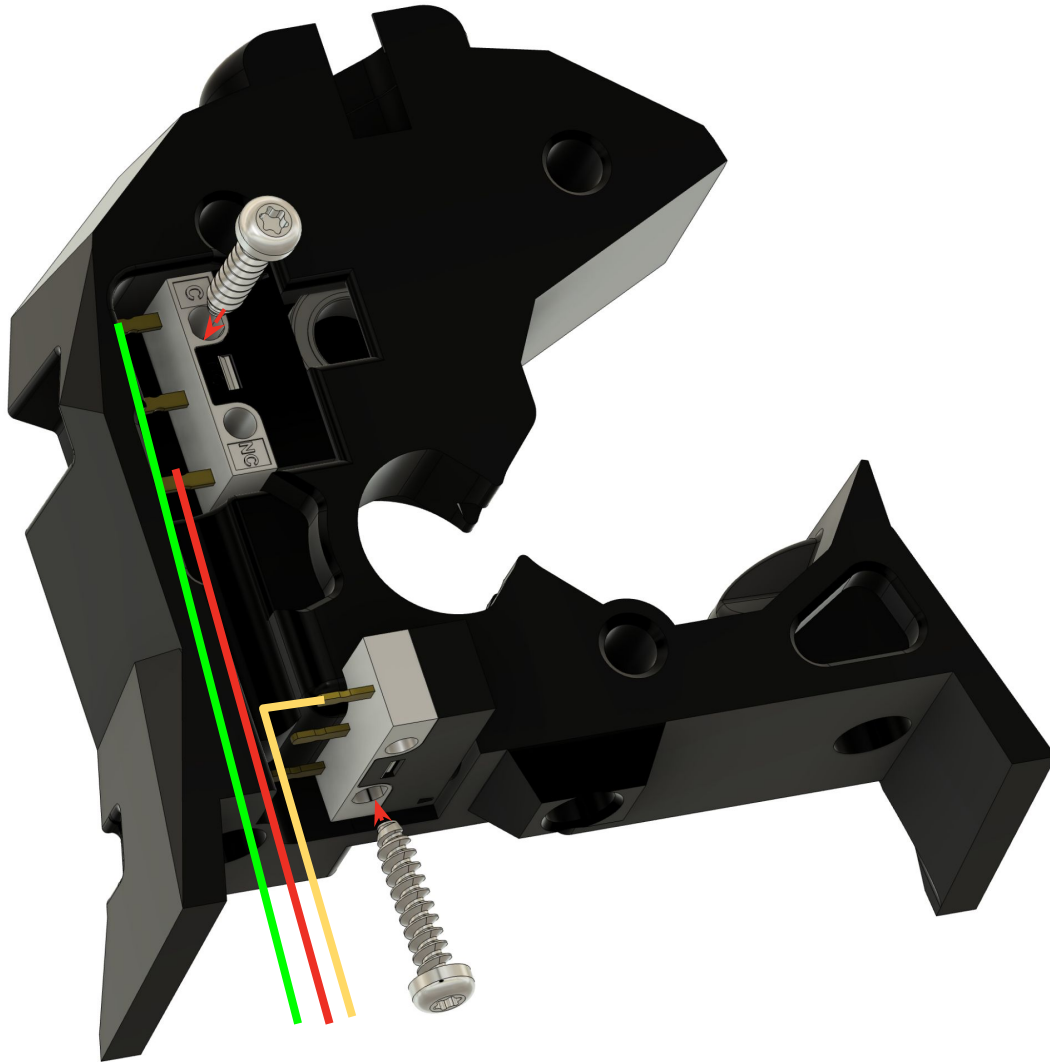
WIRING

Please note the plunger orientations for the switches. For the entry sensor, the plunger should be located towards the entry, while the toolhead sensor should be facing closest to the body.

Solder the two common leads together then solder two separate wires for the NC connector. Use three different colour wires to identify it later. Give plenty of length to trim when you wire.

You may use hotglue to protect the solder joints,

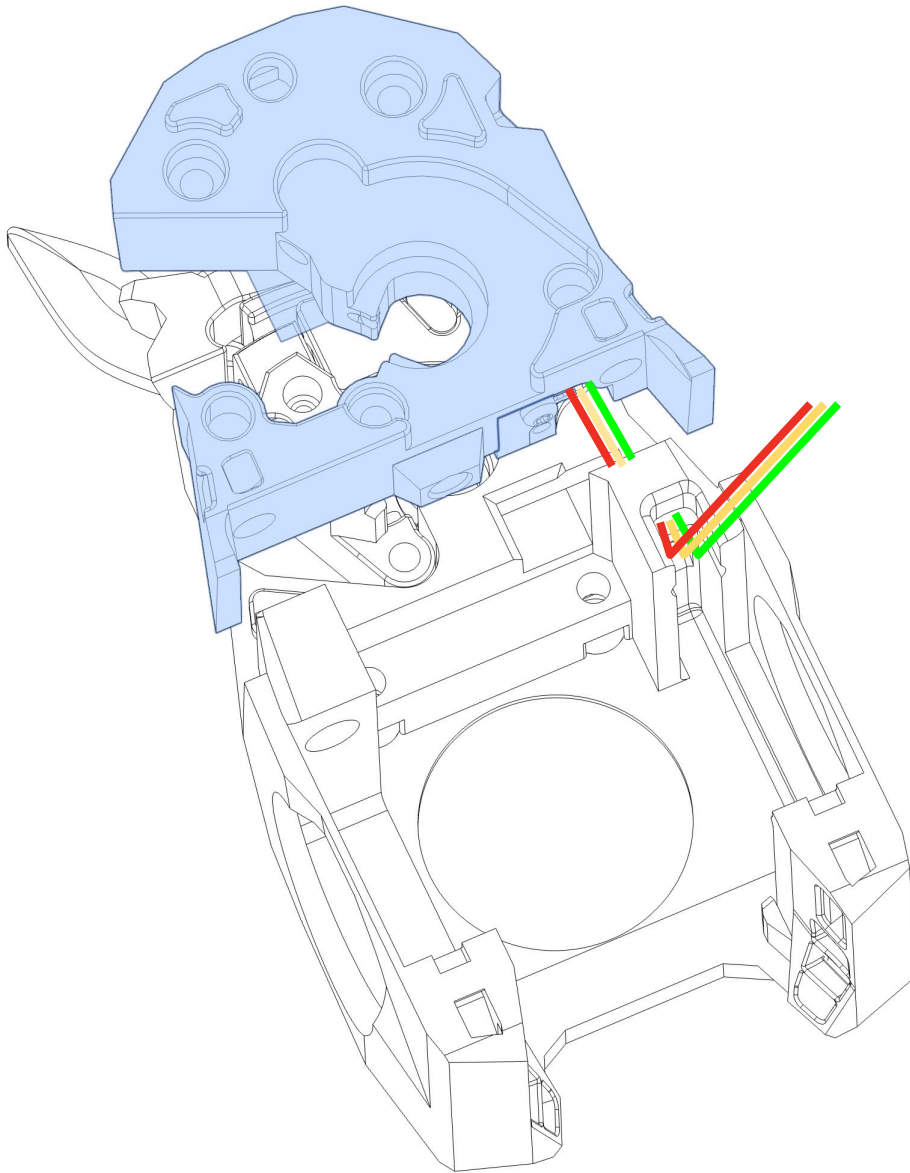
DUAL SENSOR INSTALLATION



WIRING

Put wires into wire management channels, and screw down switches with one **M2x10MM SHCS or BHCS** per switch as illustrated.

DUAL SENSOR INSTALLATION



INSERT MID-BODY

As you insert the midbody into the cowl, route the wires through the channel on the side above the fan bay. Pull wires bundles through and position the midbody in place, careful to not pinch the wires as you do so.

Refer back to Mini Stealthburner assembly for final assembly.